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<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	10/721,254	PECORA ET AL.	
	Examiner	Art Unit	
	Tan Ho	2821	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**  
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed on 11/26/2003.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
 Paper No./Mail Date 6/23/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
 Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

*Tan Ho*  
**TAN HO**  
**PRIMARY EXAMINER**

## **DETAILED ACTION**

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

In claim 14, line 1, change "The method of Claim 15" to --The method of Claim 9--.  
This change was made to eliminate the typing error.

### ***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance:

Claim 1 recites a method of communicating with below-grade devices, comprising receiving or sending transmitted radio frequency (RF) signals to or from at least one below-grade device, wherein said at least one below-grade device is conductively connected to at least one low profile antenna mounted in a groove of a traffic surface, said low profile antenna comprising a first elongated element made from an electrically conductive material; a second elongated element made from the electrically conductive material; and a cable that is conductively attached to the first and second elongated elements and conductively connects to said at least one below-grade device; wherein the first and second elongated elements each have a height that is of a low profile and lengths that are substantially equal; and wherein each elongated element is covered at least partially with a substantially non-conductive covering.

Claim 9 recites a method of monitoring data transmissions by below-grade devices comprising receiving data transmissions from at least one below-grade device on a receiving transceiver, wherein said at least one device is conductively connected to at least one low profile antenna mounted in a groove of a traffic surface, said low profile antenna comprising a first elongated element made from an electrically conductive material; a second elongated element made from the electrically conductive material; and a cable that is conductively attached to the first and second elongated elements and conductively connects to said at least one below-grade device; wherein the first and second elongated elements each have a height that is of a low profile and lengths that are substantially equal; and wherein each elongated element is covered at least partially with a substantially non-conductive covering.

Claim 16 recites a method of monitoring a plurality of underground devices, comprising receiving signals transmitted by at least two underground devices; wherein said at least two underground devices each comprise at least one low profile antenna mounted in a groove of at least one traffic surface, said low profile antenna comprising a first elongated element made from an electrically conductive material; a second elongated element made from the electrically conductive material; and a cable that is conductively attached to the first and second elongated elements and conductively connects to said underground device; wherein the first and second elongated elements each have a height that is of a low profile and lengths that are substantially equal; and wherein each elongated element is covered at least partially with a substantially non-

conductive covering; and wherein said signals are received at a central data collection point.

None of prior arts shows or suggests these methods.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Ho whose telephone number is (571) 272-1822. The examiner can normally be reached on M-F (8:00AM - 5:00PM).

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
TAN HO  
PRIMARY EXAMINER